

# COMPUTATIONAL MATHEMATICS AND MATHEMATICAL PHYSICS

Cover-to-cover translation of  
*Zhurnal vychislitel'noi matematiki i matematicheskoi fiziki*

**LIST OF CONTENTS AND AUTHOR INDEX**  
**VOLUME 34, 1994**



**PERGAMON**

**COMPUTATIONAL MATHEMATICS AND  
MATHEMATICAL PHYSICS  
ZHURNAL VYCHISLITEL'NOI MATEMATIKI  
I MATEMATICHESKOI FIZIKI**

*Chief Editor:* A. A. DORODNITSYN✠

*Deputy Chief Editor:* M. K. KERIMOV

**EDITORIAL BOARD**

A. A. ABRAMOV	V. M. KUROCHKIN	A. O. SLISENKO
A. A. ARSEN'EV	N. N. MOISEYEV	A. G. SVESHNIKOV
N. S. BAKHVALOV	YU. S. OSIPOV	V. V. VOEVODIN
O. M. BELOTSEKOVSKII	A. A. SAMARSKII	YU. I. ZHURAVLEV
V. G. KARMANOV	YU. D. SHMYGLEVSKII	

Cover-to-cover translation of *Zhurnal vychislitel'noi matematiki  
i matematicheskoi fiziki*

Russian Original Copyright Nauka, 90 Profsoyuznaya ul., Moscow 117864  
**12 Issues per annum**

**Scientific Translation Editor:** R. C. GLASS, M.A., M.Sc.,  
City University, London

**Translator:** R. LOSHAK

**Publishing and Advertising Offices:**

Elsevier Science Ltd, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, U.K.  
Tel. (01865) 843000. Fax. (01865) 843010.

Elsevier Science Inc., 660 White Plains Road, Tarrytown, NY 10591-5153, U.S.A.

**Subscription Rates**

*Annual Institutional Subscription Rates 1995: North, Central and South America US\$1416.00, Rest of the World £950.00. Sterling prices exclude VAT. Non-VAT registered customers in the European Community will be charged the appropriate VAT in addition to the price listed. Prices include postage and insurance and are subject to change without notice.*

*Subscription enquiries from customers in America should be sent to:*

*Elsevier Science Inc., 660 White Plains Road, Tarrytown, NY 10591-5153, U.S.A.,*

*and for the remainder of the world to:*

*Elsevier Science Ltd, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, U.K.*

Second class postage paid at NEWARK, NJ. Postmaster send address corrections to  
*Computational Mathematics and Mathematical Physics*, c/o Elsevier Science Inc., 660 White  
Plains Road, Tarrytown, NY 10591-5153, U.S.A.

**Microform Subscriptions and Back Issues**

Back issues of all previously published volumes, both in hard copy and on microform,  
are available direct from Elsevier Science offices (Oxford, New York).

Copyright © 1995 Elsevier Science Ltd

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, electrostatic, magnetic tape, mechanical, photocopying, recording or otherwise, without permission in writing from the copyright holder.

**Photocopying information for users in the U.S.A.** The Item-fee Code for this publication indicates that authorization to photocopy items for internal or personal use is granted by the copyright holder for libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service provided the stated fee for copying, beyond that permitted by Section 107 or 108 of the United States Copyright Law, is paid. The appropriate remittance of \$24.00 per copy per article is paid directly to the Copyright Clearance Center Inc., 222 Rosewood Drive, Danvers, MA 01923, U.S.A.

**Permission for other use.** The copyright owner's consent does not extend to copying for general distribution, for promotion, for creating new works, or for resale. Specific written permission must be obtained from the publisher for such copying.

*The Item-Fee Code for this publication is: 0965-5425/94 \$24.00 + .00*

**Disclaimer.** Whilst every effort is made by the publishers and editorial board to see that no inaccurate or misleading data, opinion or statement appears in this journal, they wish to make it clear that the data and opinions appearing in the articles herein are the sole responsibility of the contributor or advertiser concerned. Accordingly, the publishers, the editorial board, editors and translators and their respective employees, officers and agents accept no responsibility or liability whatsoever for the consequences of any such inaccurate or misleading data, opinion or statement.

©<sup>TM</sup> The paper used in this publication meets the minimum requirements of American National Standard for Information Sciences—Permanence of Paper for Printed Library Materials, ANSI Z39.48-1984.

## VOLUME CONTENTS

VOL. 34, NO. 1

1994

I. P. RYAZANTSEVA	1	Some continuous regularization methods for monotone equations
A. Z. ISHMUKHAMEDOV	9	Conditions of stability and approximation in the optimal control of hyperbolic systems
M. R. DAVIDSON	23	The conditional stability of extreme points of a polyhedral set
I. KH. SIGAL	33	Algorithms for solving the two-criterion large-scale travelling salesman problem
S. V. KUROCHKIN	45	Singular boundary-value problems for linear Hamiltonian systems
V. N. PLOTNIKOV, YU. YU. RADTSIG and S. I. EMINOV	53	Theory of the integral equation of a narrow rectilinear slot
A. V. KRASNOZHON and YU. D. PLETNER	63	The behaviour of the solution of the Cauchy problem for the gravitational-gyroscopic wave equation
N. CH. KRUTITSKAYA and P. A. KRUTITSKII	71	The electric current in a magnetized semiconducting plate with earthed side walls
S. S. MAKHANOV and A. YU. SEMENOV	85	A stable non-negative numerical method for calculating the flow of a liquid in an open channel
P. V. PLOTNIKOV and L. V. SHURSHALOV	97	The interaction of a cloud of interplanetary dust with the atmosphere
V. I. ZHUK	107	Bifurcation of the upper branch of the neutral curve for the boundary layer on a plate in a compressible flow
		<b>Short Communications</b>
A. S. LEONOV	121	Some a posteriori termination rules for the iterative solution of linear ill-posed problems
V. B. GLASKO, YU. V. GLASKO, K. V. KLYUYEV and M. A. OSIPENKO	127	Automatic control of the cementation of alloyed materials

VOL. 34, NO. 2

1994

S. L. BLYUMIN and S. P. MILOVIDOV	133	Investigation and solution of matrix equations over associative rings
T. ZHANLAV and I. V. PUZYNIN	143	The combination of the establishment method and Newton's method for solving non-linear differential problems
H. LESZCZYŃSKI	151	Discrete approximations to the Cauchy problem for hyperbolic differential-functional systems in the Schauder canonic form
N. A. STRELKOV	165	Local approximation of projection-difference methods
B. D. ABRAMOV	175	Some models of multigroup approximation in nuclear reactor theory
A. V. LATYSHEV	193	The solution of boundary-value problems for the equations of radiation transfer
M. I. GRADOBOYEV and V. A. RYKOV	205	A conservative method for the numerical solution of the kinetic equation at low Knudsen numbers
R. P. FEDORENKO	223	Some problems and approximate methods of computational mechanics
V. N. KOTEROV and V. P. PASHCHENKO	243	Calculation of axisymmetric stationary swirling motion of a heavy liquid with free surfaces



	<b>Short Communications</b>
H. D. IKRAMOV	253 On the unitary similarity of Hermitian Toeplitz matrices to real $(T + H)$ -matrices
B. A. MARKOV, A. D. POYEZD and S. A. YAKUNIN	257 An algorithm for solving Poisson's equation in an unbounded domain
A. V. KRASNOZHON, YU. D. PLETNER and M. A. SOLOV'YEV	263 The propagation of a quasifront in a stratified rotating fluid
S. A. SHISHKIN	267 The extraction of the square roots of symmetric sign-indefinite matrices. Polar decomposition version.

---

VOL. 34, NO. 3

1994

---

SH. I. GALIYEV	271 The directions of decrease for minmaxmin problems
A. F. IZMAILOV and A. A. TRET'YAKOV	287 The method of gradient descent for minimizing non-convex functions
M. V. BULATOV	301 Transformations of differential-algebraic systems of equations
V. A. GALAKTIONOV and S. A. POSASHKOV	313 Exact solutions and invariant spaces for non-linear gradient diffusion equations
YU. CHEGIS RAIM	323 A scheme of increased order of accuracy in the case of cylindrical and spherical symmetry
N. S. BAKHVALOV and M. E. EGLIT	333 An estimate of the error of averaging the dynamics of small perturbations of very inhomogeneous mixtures
M. I. GRADOBOYEV, I. N. LARINA, V. A. RYKOV and YE. M. SHAKHOV	351 Investigation of the unsteady vortex motions of a viscous incompressible fluid in the cavity of a rotating body
V. V. SVETSOV	365 An economical numerical method for one-dimensional problems of radiative gas dynamics
V. N. GOLUBKIN and V. V. NEGODA	377 Optimizing hypersonic wings
V. I. DONSKOI	389 Pseudo-Boolean optimization with a disjunctive constraint
	<b>Short Communications</b>
KH. D. IKRAMOV	399 Describing normal Toeplitz matrices
B. P. PUGACHOV	405 Regarding a method of improving the conditionality of a system of linear equations
A. B. BAKUSHINSKII	407 Note on the regularizing properties of methods of conjugate directions
YU. V. SHERETOV	409 A theorem on the dissipation of energy and exact solutions of a system of quasihydrodynamic equations
V. L. KALITVYANSKII	417 Perturbation theory for the Sturm-Liouville problem with variable coefficients

---

VOL. 34, NO. 4

1994

---

I. YA. TSURKIS	421 Fredholm's alternative for quasidiagonal matrices
F. P. VASIL'YEV and A. NEDIČ	431 A version of the regularized gradient projection method
YU. G. BULYCHEV	441 The numerical-analytic integration of differential equations by generalized interpolation
N. N. MOISEYEV	453 The biota as a regulator and the sustainability problem
A. B. PIUNOVSKII	463 The problem of convex programming with linear constraints

G. G. MALINETSKII, A. B. POTAPOV and G. Z. TSERTSVADZE	471	Some qualitative features of diffusion-induced chaos
S. A. KASHCHENKO	479	The construction of normalized systems for investigating the dynamics of hybrid and hyperbolic equations
M. YU. ZHUKOV	491	The separation of infinite-component mixtures by an electric field
G. V. DUBROVSKII and V. YU. KONTORIN	499	Formulae connecting the WKB solutions, the <i>S</i> -scattering matrix and resonances
YU. S. KOSOLAPOV, YE. YU. PROTSENKO and A. V. CHIRIKHIN	511	A method of calculating steady and unsteady two-dimensional nozzle flows of a spontaneously condensing vapour
G. K. KAMENEV	521	Analysis of an algorithm for approximating convex bodies
		<b>Short Communications</b>
N. V. BALASHEVICH, R. GABASOV and F. M. KIRILLOVA	529	A controller for the sliding optimization of dynamic control systems
V. B. PAVLOV and O. YE. RODIONOVA	535	The numerical solution of systems of linear ordinary differential equations with constant coefficients
V. A. LYUL'KA	541	The hydrodynamic resistance of a periodic lattice
D. B. SILIN and N. G. TRIN'KO	545	A modification of Graham's algorithm for the convexification of a positive-uniform function
S. A. SHISHKIN	549	Singular filtering of matrix and grid operators. Error estimates
	553	Erratum

VOL. 34, NO. 5

1994

YU. G. BULYCHEV	555	A mathematical technique for the <i>N</i> -fold differentiation of functions with a finite spectrum and its applications
R. GABASOV, F. M. KIRILLOVA and YE. A. KOSTINA	569	Piecewise-linear functions of several variables; their modelling, local behaviour and extrema
YU. G. YEVTUSHENKO and V. G. ZHADAN	579	Barrier-projective methods for non-linear programming
A. A. DOSIYEV	591	A block-grid method of increased accuracy for solving Dirichlet's problem for Laplace's equation on polygons
YU. M. LAYEVSKII	605	The decomposition of domains for parabolic problems with discontinuous solutions and the penalty method
G. I. SHISHKIN	621	A grid approximation of the method of additive separation of singularities for a singularly perturbed equation of parabolic type
N. A. DAR'IN	639	The general algebra of symmetry operators of the equations of gas dynamics in Euler and Lagrange variables
V. G. GOLUSHKOV and L. V. MASLOVSKAYA	647	The mixed finite element method in problems of the theory of shells
		<b>Short Communications</b>
YU. A. ALPIN*	665	The influence of the position of the zeros in a non-negative matrix on the convergence of the algorithm for computing its Perron root
A. A. ABRAMOV and L. F. YUKHNO	671	Determining the number of eigenvalues of a spectral problem
V. M. BELOV, T. A. RYBAL'CHENKO and V. A. SUKHANOV	679	Gradient methods for the numerical solution of the problem of the variational calculus in the classical formulation
V. R. FAZYLOV	687	Finding a minimax with specified accuracy

\*Author's name omitted from paper: appears incorrectly as M. Yu. Zhukov (translation only).

A. I. ZHDANOV	693	Direct recurrence algorithms for solving the linear equations of the method of least squares
S. V. KARTYSHOV	703	Cubic convergence of the inverse iteration method for solving the non-linear spectral problem
V. A. LYUL'KA and A. V. ROMANKO	713	Constructing interpolation curves by the grid method
A. F. IZMAILOV	723	Optimality conditions for degenerate extremum problems with inequality-type constraints
O. A. YEMETS	737	The optimization of linear and convex functions on a Euclidean combinatorial set of polypermutations
P. P. MATUS	749	Difference schemes on composite grids for hyperbolic equations
V. M. KOVENYA and A. S. LEBEDEV	763	Modifications of the splitting method for constructing economical difference schemes
N. A. KUZ'MICHEVA and A. P. SMIRNOV	775	A numerical-analytic method for solving Landau's two-dimensional kinetic equation in self-similar variables
N. V. NIKITIN	785	A spectral finite-difference method of calculating turbulent flows of an incompressible fluid in pipes and channels
V. B. GLASKO and I. N. OSKOLKOV	799	Regularization of the thermal flaw detection problem
		<b>Short Communications</b>
K. V. YEMEL'YANOV	809	Applying optimal difference grids to problems with singular perturbations
A. A. BOGOLYUBSKAYA and S. I. SERDYUKOVA	815	The construction of explicit <i>C</i> -stable schemes of maximum odd order of accuracy
YU. D. SHMYGLEVSKII	827	Vortical formations in a viscous fluid

V. N. USHAKOV and A. P. KHRIPUNOV	833	The construction of approximate integral funnels of differential inclusions
I. S. LITVINCHEV	843	The use of lower bounds in minimization by the interior-point method
V. V. BARANOV	849	Optimal dynamic recognition and decision-making
S. A. ABRAMOV	863	D'Alembert substitutions and adjoint differential equations (computer-algebraic aspects)
B. V. PAL'TSEV	875	Conditions for the convergence of iterative methods with complete splitting of the boundary conditions for the Stokes system in a circle and a ring
A. A. BYKOV, V. YU. POPOV and A. G. SVESHNIKOV	895	The use of the singular perturbations method to calculate the electromagnetic-wave-scattering operator in open periodic waveguide structures
I. A. CHEGIS	909	The problem of the eddy current distribution. Existence and uniqueness theorems and a solution algorithm
YE. D. TERENT'YEV	921	Discontinuous solutions of the viscous transonic equation
V. A. YEMELICHEV and M. K. KRAVTSOV	933	Problems of discrete vector optimization on systems of subsets which cannot be solved using a linear convolution algorithm
		<b>Short Communications</b>
V. I. ZORKAL'TSEV	943	Algorithms of projective optimization which use the multipliers of previous iterations



P. A. KRUTITSKII	951	The limit amplitude of the initial and boundary-value problem for an equation of composite type in a multiply connected domain
S. V. YAKOVLEV	959	The theory of convex continuations of functions at the vertices of convex polygons

---

VOL. 34, NO. 8/9

1994

V. O. BELASH and N. YA. MAR'YASHKIN	967	The solution of linear algebraic systems by polynomial iterative methods
V. V. VOLOSHINOV, G. G. KOTKIN and A. M. TKACH	977	Approximation methods for problems of non-linear programming
I. B. STAROVEROVA	991	Well-posedness and bounds of solutions of singular Cauchy problems for systems of non-linear ordinary differential equations
A. B. VASIL'YEVA	1007	Contrasting structures in systems of singularly perturbed equations
A. S. BARASHKOV	1019	A dual asymptotic model for solving elliptic equations
V. V. VARLAMOV	1033	The asymptotic form for long times of the solution of the Boussinesq equation with dissipation
A. N. IVANOVA and B. L. TARNOPOL'SKII	1045	Effects of diffusion instability in inhomogeneous conditions
V. I. GRYN' and L. V. NITISHINSKAYA	1057	The solution of Abel's integral equation by a modified broken line of minimum length method
P. A. KRUTITSKII	1073	Dirichlet's problem for the Helmholtz equation outside cuts in a plane
A. G. KUZ'MIN	1091	Cumulative and non-linear phenomena in the local supersonic region
YE. V. BRATTSEVA and V. P. CHERENIN	1103	Methods of finding all minimum coverings of a graph by cliques
		<b>Short Communications</b>
M. YU. IBRAGIMOV, KH. D. IKRAMOV, N. V. SAVEL'YEVA and V. N. CHUGUNOV	1119	The stabilizer of the set of asymmetric Toeplitz matrices
M. F. SUKHININ	1125	Step-by-step quadratic penalty solution of a quadratic programming problem
V. T. VOLKOV and N. N. NEFEDOV	1133	Periodic solutions with boundary layers of a singularly perturbed reaction-diffusion model
S. L. DEGTYARYEV	1141	The stability of difference schemes with variable weights for the one-dimensional heat-conduction equation
A. R. AL'SHIN and YU. D. PLETNER	1147	Explicit solution of an initial and boundary-value problem of the theory of ion-acoustic waves in a non-magnetized plasma and its asymptotic form
V. P. ZHUKOV	1155	Explicit finite-difference scheme for the magnetohydrodynamic equations taking the Hall effect into account
V. I. KOPCHENOV and D. A. NIKIFOROV	1161	An implicit iterative scheme for calculating the flows of a viscous incompressible fluid

---

VOL. 34, NO. 10

1994

I. M. PRUDNIKOV	1169	Differential properties of the extremum function with respect to a Lipschitzian many-valued mapping
N. B. KONYUKHOVA	1179	Stable Lyapunov manifolds for autonomous systems of non-linear ordinary differential equations
V. F. BUTUZOV and S. T. YESIMOVA	1197	A singularly perturbed "reaction-diffusion-transfer" system which degenerates into a system of two first-order differential equations

A. B. VASIL'YEVA	1215	Step-like contrasting structures for a system of singularly perturbed equations
N. L. PATSKO	1225	Numerical solution of elliptic boundary-value problems by the finite-element method using <i>B</i> -splines
A. V. KOSTROV and A. M. MARDYUK	1237	A mathematical problem in missile theory
A. N. KRAIKO, A. S. TELYAKOVSKII and N. I. TILLYAYEVA	1251	Profiling the optimal contour of a supersonic nozzle in highly rotational flow
YU. G. SMIRNOV	1265	The solvability of vector integro-differential equations for the problem of the diffraction of an electromagnetic field by screens of arbitrary shape
YU. V. ZASORIN	1277	Exact solutions of some external problems described by non-stationary viscous transonic equations
V. F. KAMENETSKII and A. YU. SEMENOV	1287	Self-consistent isolation of discontinuities in continuous calculations of gas-dynamic flows
V. A. TUPCHIEV	1299	The convergence in weak topologies of approximate methods for an isentropic gas-dynamic system
A. S. MECHENOV		<b>Short Communications</b>
A. A. ABRAMOV	1313	The effect of rounding errors for systems of linear algebraic equations
A. S. DOSTOVALOVA and S. T. SIMAKOV	1317	A method of solving some multiparameter eigenvalue problems that arise when using Fourier's method
S. N. SHELUD'KO	1321	The fundamental solution of the model equation of an incompressible stratified liquid
V. I. ZUBOV and Z. G. ZUIKOVA	1327	Analytic integration of the transport equation with respect to the mean free path in a problem with a barrier geometry and an infinite plane source
	1333	A class of solutions of the problem of optimizing the nozzle of a water cannon

---

VOL. 34, NO. 11

1994

---

V. P. IL'IN and I. Z. LIVSHITS	1341	A symmetrized Stone's method
A. F. IZMAILOV	1349	The well-posedness of non-linear operator equations
V. I. YELKIN	1363	Subsystems of control systems and control problems with equality-type constraints on the phase variables
A. G. KREMLEV	1371	An iterative method of solving problems of the optimal control of singularly perturbed systems with quadratic constraints
G. YU. KULIKOV	1389	The practical implementation and efficiency of numerical methods for solving Cauchy's problem with an algebraic relation
G. I. SHISHKIN	1403	A grid approximation of singularly perturbed quasilinear elliptic and parabolic equations which degenerate into equations without spatial derivatives
P. A. KRUTITSKII	1421	Neumann's problem for the Helmholtz equation outside cuts in the plane
V. I. GRYN' and L. V. NITISHINSKAYA	1433	Numerical solution of the inverse problem of reconstructing the source function in a two-dimensional plane geometry
V. M. KRIVTSOV	1445	An approximate factorization scheme for calculating gas flows in channels
I. YU. BABAYEV, V. A. BASHKIN and I. V. YEGOROV	1455	Numerical solution of the Navier-Stokes equations using variational iteration methods
		<b>Short Communications</b>
KH. D. IKRAMOV	1463	Tridiagonal forms of complex symmetric and persymmetric matrices



V. I. DEVKIN	1469	A constructive iterative procedure for solving operator equations
A. V. NESTEROV	1477	The asymptotic form of the solution of an elliptic equation with a singularly perturbed boundary condition
V. I. PINCHUKOV	1483	The construction of monotone schemes of any order of approximation for one class of equation
YU. M. GRISHIN, N. P. KOZLOV and V. V. KUZENOV	1489	A modification of Glimm's method for solving the equations of gas dynamics
I. A. KOSTYLEV, G. G. MALINETSKII and A. B. POTAPOV	1493	Order parameters in a Hopfield neural network
A. A. DYNNIKOV	1501	An algorithm for improving the convergence of an iterative method of solving optimal control problems by non-linear deformation of the time axis

---

VOL. 34, NO. 12

1994

---

V. P. IL'IN, V. I. KARNACHUK and M. R. LARIN	1503	Tree organization of the data structure for Cholesky factorization
YE. B. KUZNETSOV and V. I. SHALASHILIN	1511	A parametric approximation
YA. I. RABINOVICH	1521	A hierarchical multicriteria procedure for improving a basic solution in problems of large dimensions
YU. A. KREMEN' and P. I. MONASTYRNYI	1531	Orthogonal difference pivotal condensation for two-point grid equations of general form with separate multipoint boundary conditions
G. I. SHISHKIN	1541	The method of additive separation of singularities for quasilinear singularly perturbed elliptic and parabolic equations
M. P. GALANIN	1559	Embedding theorems for the traces of grid functions in three dimensions
P. N. VABISHCHEVICH	1573	Regionally additive difference schemes with a stabilizing correction for parabolic problems
I. G. BELUKHINA	1583	The accuracy of approximations on rectangular grids in problems of the theory of elasticity with singularities
V. T. ZHUKOV, A. V. ZABRODIN and O. B. FEODORITOVA	1591	Features of the numerical simulation of the target of inertial thermo-nuclear synthesis in the approximation of heat conduction gas dynamics
V. S. SAKOVICH	1603	Multiple-grid solution of Euler's equations on unstructured grids
		<b>Short Communications</b>
I. L. OSIPOV	1617	The correct solution of the problem of the numerical differentiation of functions of one or several variables
D. A. NIKIFOROV	1623	The use of the method of compact differences on spaced grids
A. A. ABRAMOV and A. A. ASLANYAN	1629	A generalization of the method for solving the eigenvalue problem for Hamiltonian systems
V. B. VASIL'YEV	1635	The Wiener-Hopf equations and the mathematical theory of diffraction
	1643	Erratum

i Volume Contents/Author Index for Volume 34, 1994

*Published April 1995*



## AUTHOR INDEX

- Abramov, A. A. 671\*, 1317\*, 1629\*  
 Abramov, B. D. 175  
 Abramov, S. A. 863  
 Al'shin, A. R. 1147\*  
 Alpin, Yu. A. 665\*†  
 Aslanyan, A. A. 1629\*
- Babayev, I. Yu. 1455  
 Bakhvalov, N. S. 333  
 Bakushinskii, A. B. 407\*  
 Balashevich, N. V. 529\*  
 Baranov, V. V. 849  
 Barashkov, A. S. 1019  
 Bashkin, V. A. 1455  
 Belash, V. O. 967  
 Belov, V. M. 679\*  
 Belukhina, I. G. 1583  
 Blyumin, S. L. 133  
 Bogolyubskaya, A. A. 815\*  
 Brattseva, Ye. V. 1103  
 Bulatov, M. V. 301  
 Bulychov, Yu. G. 441, 555  
 Butuzov, V. F. 1197  
 Bykov, A. A. 895
- Chegis, I. A. 553, 909  
 Chegis Raim, Yu. 323  
 Cherenin, V. P. 1103  
 Chirikhin, A. V. 511  
 Chugunov, V. N. 1119\*
- Dar'in, N. A. 639  
 Davidson, M. R. 23  
 Degtyaryev, S. L. 1141\*  
 Devkin, V. I. 1469\*  
 Donskoi, V. I. 389  
 Dosiyeu, A. A. 591  
 Dostovalova, A. S. 1321\*  
 Dubrovskii, G. V. 499  
 Dynnikov, A. A. 1501\*
- Eglit, M. E. 333  
 Eminov, S. I. 53
- Fazylov, V. R. 687\*  
 Fedorenko, R. P. 223  
 Feodoritova, O. B. 1591
- Gabasov, R. 529\*, 569  
 Galaktionov, V. A. 313  
 Galanin, M. P. 1559  
 Galiyev, Sh. I. 271  
 Glasko, V. B. 127\*, 799  
 Glasko, Yu. V. 127\*  
 Golubkin, V. N. 377  
 Golushkov, V. G. 647  
 Gradoboyev, M. I. 205, 351  
 Grishin, Yu. M. 1489\*
- Gryn', V. I. 1057, 1433
- Ibragimov, M. Yu. 1119\*  
 Ikramov, H. D. 253\*  
 Ikramov, Kh. D. 399\*, 1119\*, 1463\*  
 Il'in, V. P. 1341, 1503  
 Ishmukhametov, A. Z. 9  
 Ivanova, A. N. 1045  
 Izmailov, A. F. 287, 723, 1349
- Kalitvyanskii, V. L. 417\*  
 Kamenetskii, V. F. 1287  
 Kamenev, G. K. 521  
 Karnachuk, V. I. 1503  
 Kartyshov, S. V. 703  
 Kashchenko, S. A. 479  
 Khripunov, A. P. 833  
 Kirillova, F. M. 529\*, 569  
 Klyuyev, K. V. 127\*  
 Kontorin, V. Yu. 499  
 Konyukhova, N. B. 1179  
 Kopchenov, V. I. 1161\*  
 Kosolapov, Yu. S. 511  
 Kostina, Ye. A. 569  
 Kostrov, A. V. 1237  
 Kostylev, I. A. 1493\*  
 Koterov, V. N. 243  
 Kotkin, G. G. 977  
 Kovenya, V. M. 763  
 Kozlov, N. P. 1489\*  
 Kraiko, A. N. 1251  
 Krasnozhon, A. V. 63, 263\*  
 Kravtsov, M. K. 933  
 Kremen', Yu. A. 1531  
 Kremlev, A. G. 1371  
 Krivtsov, V. M. 1445  
 Krutitskaya, N. Ch. 71  
 Krutitskii, P. A. 71, 951\*, 1073, 1421  
 Kulikov, G. Yu. 1389  
 Kurochkin, S. V. 45  
 Kuz'micheva, N. A. 775  
 Kuz'min, A. G. 1091  
 Kuzenov, V. V. 1489\*  
 Kuznetsov, Ye. B. 1511
- Larin, M. R. 1503  
 Larina, I. N. 351  
 Latyshev, A. V. 193  
 Layevskii, Yu. M. 605  
 Lebedev, A. S. 763  
 Leonov, A. S. 121\*  
 Leszczyński, H. 151  
 Litvinchev, I. S. 843  
 Livshits, I. Z. 1341  
 Lyul'ka, V. A. 541\*, 713
- Makhanov, S. S. 85
- Malinetskii, G. G. 471, 1493\*  
 Mar'yashkin, N. Ya. 967  
 Mardyuk, A. M. 1237  
 Markov, B. A. 257\*  
 Maslovskaya, L. V. 647  
 Matus, P. P. 749  
 Mechenov, A. S. 1313\*  
 Milovidov, S. P. 133  
 Moiseyev, N. N. 453  
 Monastyrnyi, P. I. 1531
- Nedič, A. 431  
 Nefedov, N. N. 1133\*  
 Negoda, V. V. 377  
 Nesterov, A. V. 1477\*  
 Nikiforov, D. A. 1161\*, 1623\*  
 Nikitin, N. V. 785  
 Nitishinskaya, L. V. 1057, 1433
- Osipenko, M. A. 127\*  
 Osipov, I. L. 1617\*  
 Oskolkov, I. N. 799
- Pal'tsev, B. V. 875  
 Pashchenko, V. P. 243  
 Patsko, N. L. 1225  
 Pavlov, V. B. 535\*  
 Pinchukov, V. I. 1483\*  
 Piunovskii, A. B. 463  
 Pletner, Yu. D. 63, 263\*, 1147\*  
 Plotnikov, P. V. 97  
 Plotnikov, V. N. 53  
 Popov, V. Yu. 895  
 Posashkov, S. A. 313  
 Potapov, A. B. 471, 1493\*  
 Poyezd, A. D. 257\*  
 Protsenko, Ye. Yu. 511  
 Prudnikov, I. M. 1169  
 Pugachov, B. P. 405\*  
 Puzynin, I. V. 143
- Rabinovich, Ya. I. 1521  
 Radtsig, Yu. Yu. 53  
 Rodionova, O. Ye. 535\*  
 Romanko, A. V. 713  
 Ryazantseva, I. P. 1  
 Rybal'chenko, T. A. 679\*  
 Rykov, V. A. 205, 351
- Sakovich, V. S. 1603  
 Savel'yeva, N. V. 1119\*  
 Semenov, A. Yu. 85, 1287  
 Serdyukova, S. I. 815\*  
 Shakhov, Ye. M. 351  
 Shalashilin, V. I. 1511  
 Shelud'ko, S. N. 1327\*  
 Sheretov, Yu. V. 409\*  
 Shishkin, G. I. 621, 1403, 1541

\*Short Communications

†Author's name omitted from paper: appears incorrectly as M. Yu. Zhukov (translation only).



Shishkin, S. A. 267\*, 549\*  
 Shmyglevskii, Yu. D. 827\*  
 Shurshalov, L. V. 97  
 Sigal, I. Kh. 33  
 Silin, D. B. 545\*  
 Simakov, S. T. 1321\*  
 Smirnov, A. P. 775  
 Smirnov, Yu. G. 1265  
 Solov'yev, M. A. 263\*  
 Staroverova, I. B. 991  
 Strelkov, N. A. 165  
 Sukhanov, V. A. 679\*  
 Sukhinin, M. F. 1125\*  
 Sveshnikov, A. G. 895  
 Svetsov, V. V. 365  
  
 Tarnopol'skii, B. L. 1045  
 Telyakovskii, A. S. 1251  
 Terent'yev, Ye. D. 921  
 Tillyayeva, N. I. 1251

Tkach, A. M. 977  
 Tret'yakov, A. A. 287  
 Trin'ko, N. G. 545\*  
 Tsertsvadze, G. Z. 471  
 Tsurkis, I. Ya. 421  
 Tupchiyev, V. A. 1299  
  
 Ushakov, V. N. 833  
  
 Vabishchevich, P. N. 1573  
 Varlamov, V. V. 1033  
 Vasil'yev, F. P. 431  
 Vasil'yev, V. B. 1635\*  
 Vasil'yeva, A. B. 1007, 1215  
 Volkov, V. T. 1133\*  
 Voloshinov, V. V. 977  
  
 Yakovlev, S. V. 959\*  
 Yakunin, S. A. 257\*  
 Yegorov, I. V. 1455

Yelkin, V. I. 1363  
 Yemel'yanov, K. V. 809\*  
 Yemelichev, V. A. 933  
 Yemets, O. A. 737  
 Yesimova, S. T. 1197  
 Yevtushenko, Yu. G. 579  
 Yukhno, L. F. 671\*  
  
 Zabrodin, A. V. 1591  
 Zasorin, Yu. V. 1277  
 Zhadan, V. G. 579  
 Zhanlav, T. 143  
 Zhdanov, A. I. 693  
 Zhuk, V. I. 107  
 Zhukov, M. Yu. 491, 665†  
 Zhukov, V. P. 1155\*  
 Zhukov, V. T. 1591  
 Zorkal'tsev, V. I. 943\*  
 Zubov, V. I. 1333\*  
 Zuikova, Z. G. 1333\*

†Name appears on paper in error: correct author Yu. A. Alpin.

